

# Kansas State University

## Waters Hall Fire Sprinkler Installation PROGRAM

November 2017

Prepared by Facilities Campus Planning and Project Management



## Introduction

Waters Hall is home to the College of Agriculture and several departments within the College of Arts and Sciences. The 143,000 square foot building was built in multiple phases and consists of basement, first, second and third floors in the east and west wings and basement, first, second, third and fourth floor in the center wing.

The east wing was constructed in 1913 and the west wings was constructed in 1923. The connecting link (Waters Central) was constructed in 1952. Roof reconstruction occurred in 1957 and a significant remodeling occurred in east wing in 1959 and west wing in 1964. Small projects and roof projects were completed between 1964 and 2015. The Campus Chilled Water project extended chilled water to the building in preparation of future conversion of the currently window air-condition building to a four pipe HVAC system.

The construction for the east wing is masonry walls, wood floor and roof structure. The construction of the west wing is masonry walls, steel columns encased with masonry, concrete floor structure and wood roof structure. The construction of the connecting link (Waters Central) is masonry/concrete walls, concrete columns, concrete floor and roof structure. The fourth floor originally was a penthouse and is constructed with a wood structure.

The existing building does not have a fire suppression system. A fire suppression system would address current life safety deficiencies in the existing building and would enhance the overall safety of the building occupants.

## Site Map



## Project Description

A current project (A-013424) is installing a fire service entrance and standpipe system. The main fire sprinkler entrance is routed through the crawl space of the building. Back flow prevention is located in Room B41 (basement of Waters central). Main standpipe lines are installed in the basement connecting the buildings four stairs. Standpipes are installed in each stair.

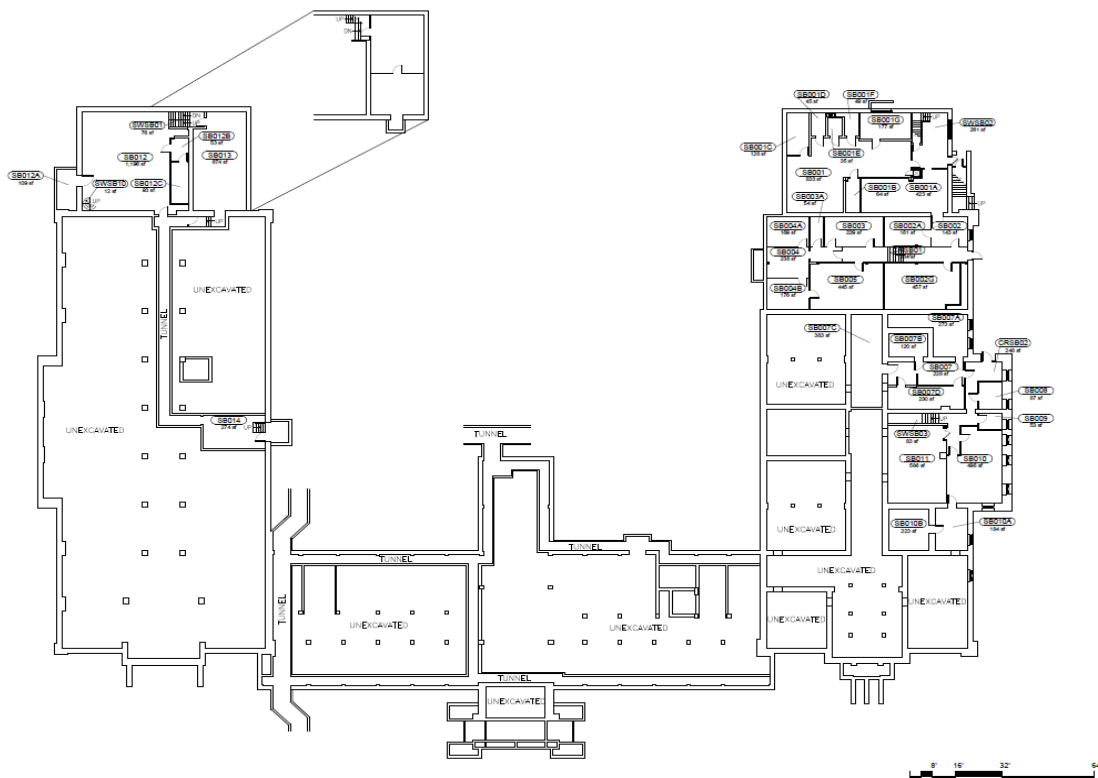
This Fire Suppression program and project will tie into the standpipe in each stair and provide compliant NFPA 13 fire suppression system for the entire building (east, west and central wings).

The intent is for a complete design for the entire building. Installation of the systems may be implemented in phases as funding is available. Installation most likely will occur while the building is occupied and this will need to be considered in development of design and construction documents.

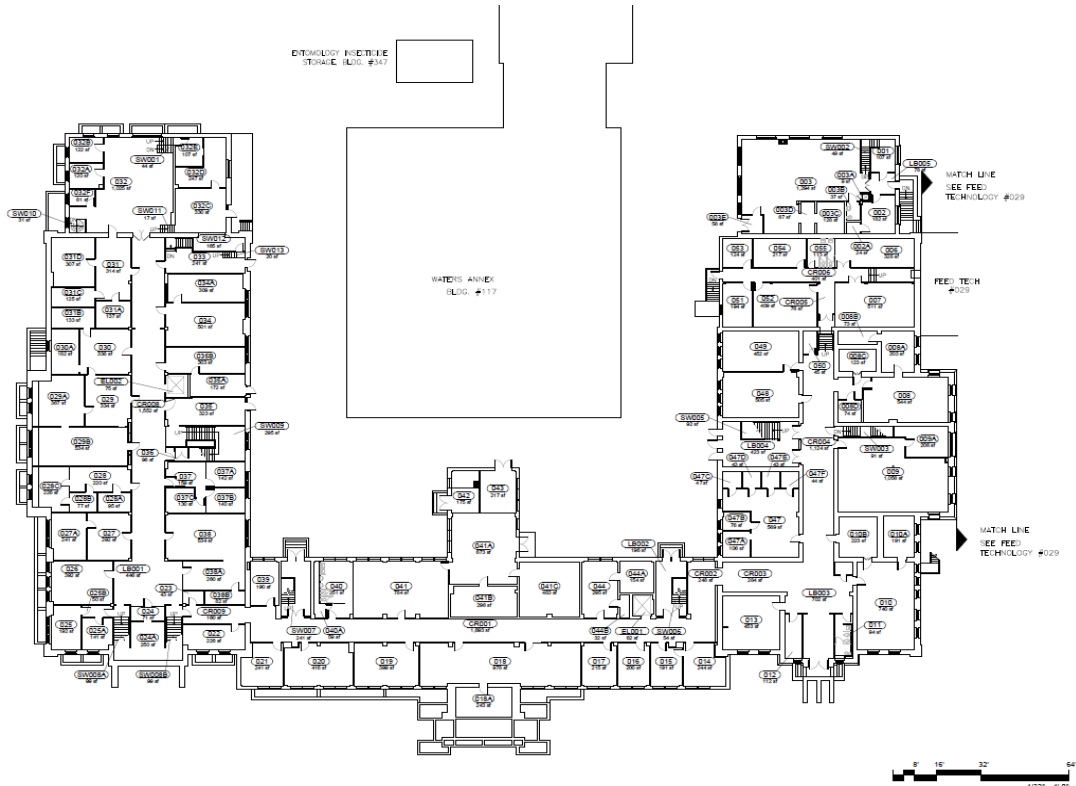
A code footprint currently is on file with the Fire Marshal's office. The code footprint will need to be updated to indicate this life safety system. This project will bid through the Office of Facilities Property Management.

## Existing Building Floor Plans

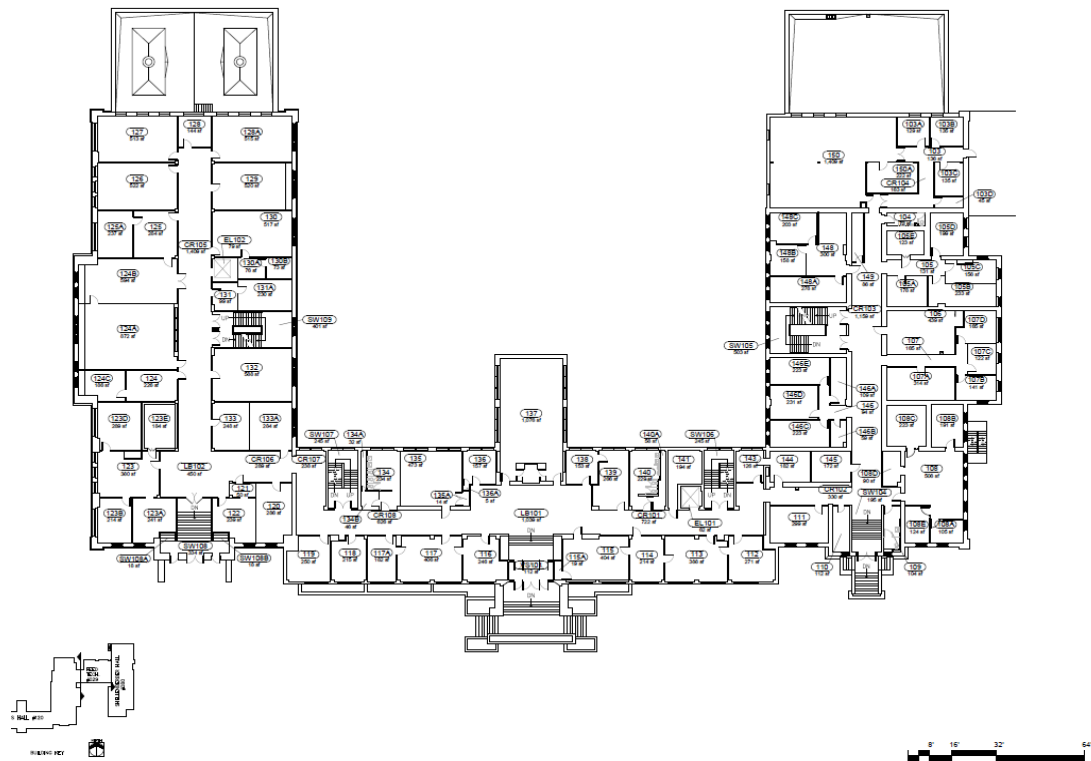
### Crawl Space Plan



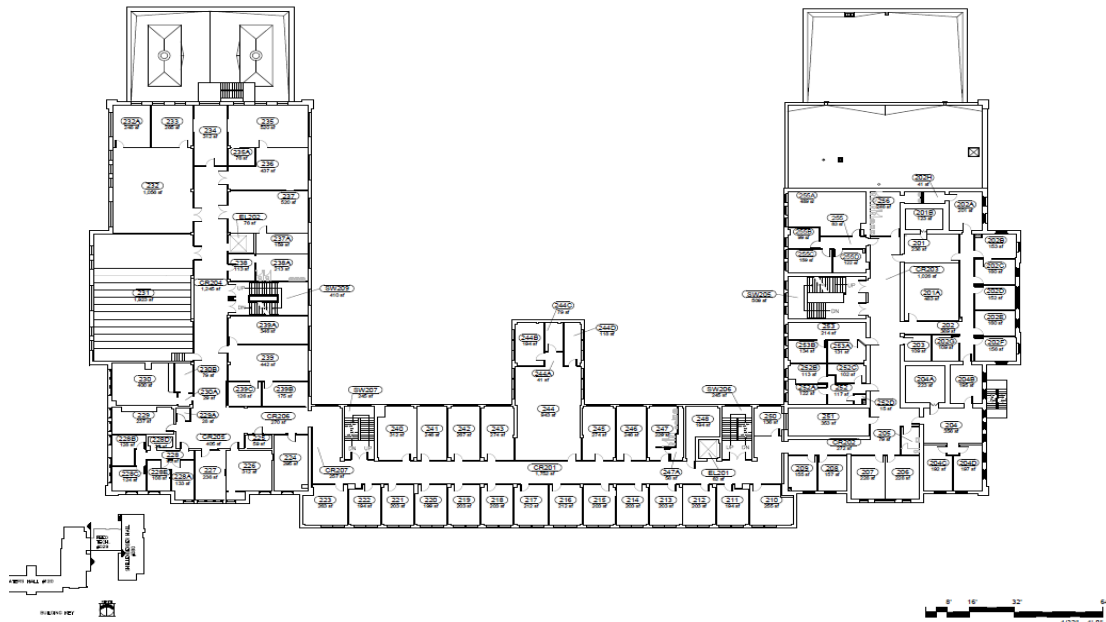
## Basement Plan



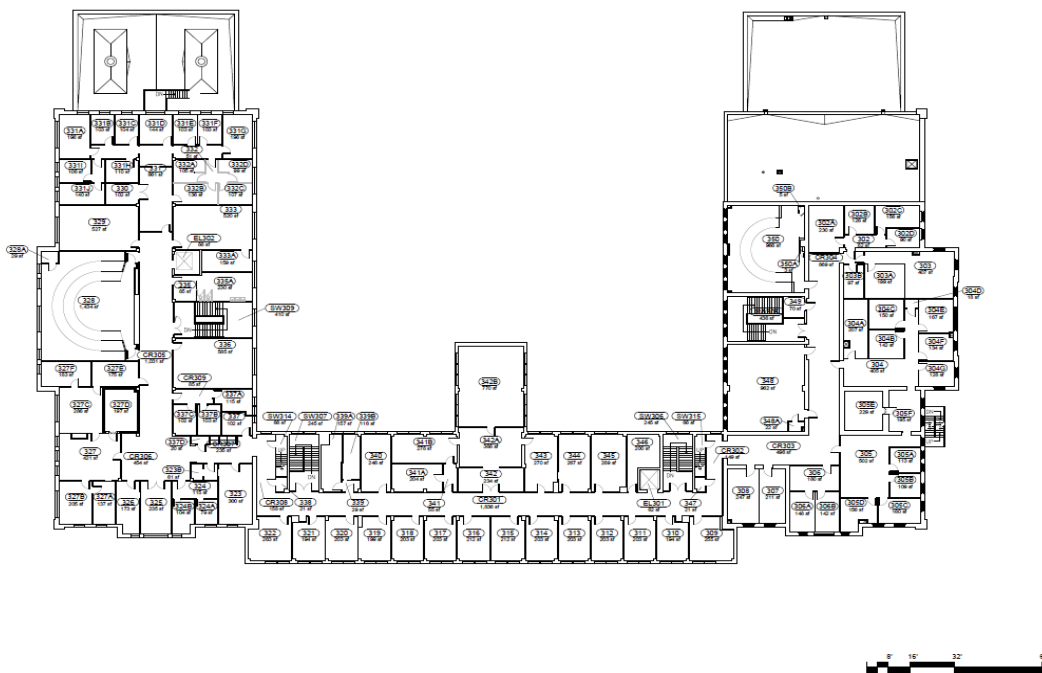
### First Floor Plan



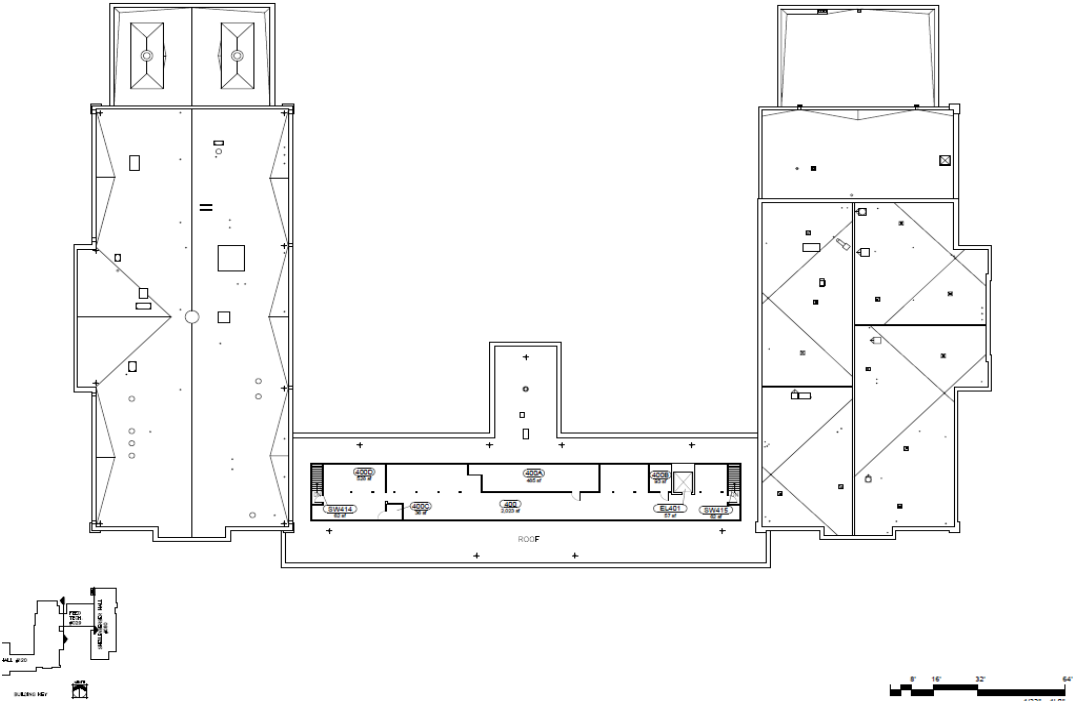
## Second floor plan



## Third Floor Plan



Fourth Floor Plan



## Budget

<b>Estimate of Project Costs</b>	
<b>Design Fees</b>	
(Architect, Engineer, other Consultants including commissioning)	\$ 70,000
<b>Construction</b>	
(Construction Cost, etc.)	\$ 700,000
<b>Ancillary Contracts</b>	\$ 0
(Site Survey, Geotechnical Investigation, Construction Testing)	
<b>FF&amp;E</b>	
(Furniture, A/V, equipment, etc.)	\$ 0
<b>Miscellaneous Costs</b>	
(Administrative fees, internal labor, ancillary contracts, etc.)	\$ 70,000
<b>Contingency</b>	
(%)	\$ 70,000
<b>Total</b>	<b>\$ 910,000</b>

## Funding

The project will be funded with EBF Funds.

## Timeline/Schedule

<b>AE procurement</b>	<b>January 2018</b>
<b>Design</b>	<b>January – April 2018</b>
<b>Bidding</b>	<b>April 15 - May 15, 2018</b>
<b>Construction</b>	<b>June 1, 2018 – June 1, 2019</b>